REMARKS/ARGUMENTS

The courtesies extended by the Examiner and her supervisor at the 22 May 2006 interview are, at the outset, appreciatively noted. During the interview, the primary reference cited by the Examiner was discussed in light of the clarifying amendments proposed to the claims by the undersigned attorney, as set forth herein. The Evans et al. reference formally submitted by Applicants via Information Disclosure Statement was also presented for the Examiners' subsequent review.

Responsive to the 25 January 2006 Office Action and the discussions had at the interview, each of the independent claims 1, 15, 29, 31, and 34 – 35 is hereby amended for further prosecution with the other pending claims. It is believed that with such amendment of claims, there is a further clarification of their recitations.

In the Office Action, the Examiner objected to Claims 15 and 34 – 35 for a minor grammatic informality. The informality has now been corrected in the claims as directed by the Examiner.

Also in the Office Action, the Examiner rejected Claims 1 – 2, 8 – 9, 15 – 16, 22 – 23, 29, and 34 – 35 under 35 U.S.C. § 102(b) as being anticipated by the Dent reference. The Examiner also rejected Claim 31 under 35 U.S.C. § 103(a) as being unpatentable over Dent in view of the Carobolante et al. reference. In setting forth the latter rejection, the Examiner acknowledged that Dent fails to

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specifically disclose a frequency locked loop adapted to detect a carrier frequency offset in a first signal and to produce an analog offset signal. The Examiner cited Carobolante et al. for disclosing a frequency locked loop coupled to a DAC, however, and on that basis concluded that it would have been obvious to one of ordinary skill in the art to have incorporated as much into the Dent system.

The Examiner additionally rejected under 35 U.S.C. § 103(a) Claims 4 and 18 as being unpatentable over Dent in view of the Shiino et al. reference; and claims 5 and 19 as being unpatentable over Dent in view of the Kang reference. In setting forth these rejections, the Examiner cited Shiino et al. for disclosing a digital communication receiver which performs complex correlation to compensate for frequency offset, and Kang for disclosing frequency shift keying for controlling frequency offset in a digital receiver system. The Examiner concluded in each case that it would have been obvious to one of ordinary skill in the art to have incorporated the feature into the Dent system.

Among other things, the claimed device/method includes generating and applying in preemptive manner a "comparative" "offset" between carrier frequency references used "locally" by respective first and second transceiver units, as each of the newly-amended independent claims now more clearly recites. As these newly-amended independent claims also now more clearly recite, such comparative offset results from "a continuous comparison of received and detected signals" during the "continuous bi-directional" communication occurring between

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the transceiver units "for the direct exchange of information" therebetween. Apart from making use of this comparative offset to correct for its own frequency error correction, a transceiver unit makes preemptive use of such comparative offset "to correct for an error in the carrier frequency reference used locally at the [other] ... transceiver unit," as each of the newly-amended independent claims also now more clearly recites.

The full combination of these and other features now more clearly recited by Applicant's pending claims is nowhere disclosed by the presently cited references, nor by the Evans et al. reference disclosed by Applicants. Turning first to the primarily-cited Dent reference, the reference is directed to a system wherein mobile communication between mobile stations 120 and a hub station 100 occurs via an intermediary satellite 110 which serves as a communication relay. The focus of the reference is upon the correction of frequency shifts occurring between this orbiting satellite 110 and a mobile station on the ground. The reference borrows from GPS technology to determine and compensate for changes in frequency due to Doppler shift effects arising from the satellite's movement relative to the mobile station. Frequency error due to temperature fluctuation is also estimated (via either a look-up table or averaging pre-stored temperature-based frequency values) and compensated for at the mobile station.

During operation, Dent's frequency error detector 210 employs an onboard satellite receiver (such as the so-called TRANSIT receiver) to derive a satellite

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navigation solution based upon the satellite's position and motion, so as to thereby "determine a frequency error and a Doppler shift of the received signal," (column 5; lines 14-16). This frequency error determination is then used by Dent's frequency correction means 212 to calculate a frequency correction signal suitable for the observed Doppler shift. Hence, the frequency error calculated and used for the correction is hardly "a comparative" offset indicative of an "offset between respective common frequency references" at remotely disposed first and second transceiver units, let alone one resulting from "a continuous comparison of received and detected signals," as each of the newly-amended independent claims clearly recites.

Nor is the frequency error correction applied by Dent one which actually "correct[s] for an error in the carrier frequency reference used locally" at the other remotely disposed transceiver unit, as the pending independent claims also clarify. Indeed, Dent nowhere directs itself to any mismatch of locally-used carrier references, focusing instead upon the effects of observation shifts caused by the satellite's movement.

The frequency error detector 310 used by Dent in an alternate embodiment includes in the frequency error correction, correction for fluctuations in temperature. This too is generated based upon certain observed operational parameters, such as the sensed temperature and its corresponding look-up table value, rather than being based upon any "comparative" frequency "offset"

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resulting from a "continuous comparison of received and detected signals," as each of the newly-amended independent claims recites.

Thus, while Dent does disclose at least the application of the Doppler shift error correction to precompensate at its transmitter 318, both the type of frequency error and the means by which it corrects for those errors quite clearly depart from Applicants' claimed device and method. What is more, the intermediary relay function served by Dent's satellite 110 teaches away from any notion of that satellite itself maintaining "continuous" bi-directional communication with a given mobile station "for the direct exchange of information" therewith, as the claims also now more clearly recite.

Given such contrary teachings of the primarily-cited Dent reference, the Carobolante et al., Shiino et al., and Kang references secondarily cited by the Examiner are found to be quite ineffectual to the present patentability analysis. Each was relied upon for disclosing a specific feature, and does not cure the deficiencies of the Dent reference.

Turning next to the disclosed Evans et al. reference, the reference discloses a subscriber terminal which applies frequency compensation at its transmitter local oscillator. The reference nonetheless precludes a number of features recited by Applicants' pending claims. It is telling in this regard that the error which Evans et al.'s subscriber terminal compensates for is its own temperature-induced frequency drift. The terminal nowhere compensates for any error in the carrier

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frequency reference used "locally" at another terminal remotely disposed therefrom, as Applicants' pending claims recite. Nor does Evans et al. teach the generation of such comparative offset based upon a "continuous comparison of received and detected signals," as the claims also recite. Evans et al. teaches quite to the contrary, in fact, explaining that its "frequency error needs only to be updated periodically, perhaps once per minute, due to variations in ambient temperature," (column 4; lines 6 – 8).

It is respectfully submitted therefore, that the cited Dent, Carobolante et al., Shiino et al., and Kang references, as well as the disclosed Evans et al. reference, even when considered together, fail to disclose the unique combination of features now more clearly recited by Applicants' pending claims for the purposes and objectives disclosed in the subject Patent Application.

It is believed that the subject Patent Application has now been placed fully in condition for allowance, and such action is respectfully requested.

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